

Title (en)
ELECTROMECHANICAL POWER-SPLIT SYSTEM

Title (de)
ELEKTROMECHANISCHES LEISTUNGSVERTEILUNGSSYSTEM

Title (fr)
SYSTÈME DE DIVISION DE PUISSANCE ÉLECTROMÉCANIQUE

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Application
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Abstract (en)
[origin: WO2021239167A1] The invention relates to an electromechanical power-split system and a method of operating thereof, with a mechanical drive branch comprising an internal combustion engine (3), and with an electric drive branch comprising a first motor-generator block (59) including a first motor-generator (1) and a second motor-generator block (60) including a second motor-generator (2), wherein the first motor-generator (1) is connectable to the internal combustion engine (3) and to the second motor-generator (2). The system comprises a planetary gearset (4) with dual planet gears (46) and four input/output members for altering the flow ratio of the mechanical and electric drive branch, wherein each input/output member is either an input or output member. Each dual planet gear (46) is connected to the four input/output members, which are a first pair of input/output members formed by a first sun gear (41) and a ring gear (44), and a second pair of input/output members formed by a second sun gear (43) and a planet carrier (45). Any one of said two pairs of input/output members comprises two input members of the planetary gearset (4). One of the two input members is connectable to the internal combustion engine (3) and the other of the two input members is connected to the second motor-generator (2), whereas the remaining other of said two pairs of input/output members comprises two output members of the planetary gearset (4). The output members of the planetary gearset (4) are connectable to a two-branch output block (38), and mechanically further via the output block (38) to an output shaft (10), wherein each of the output members is connectable to only one of the branches of the output block (38).

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